

# DOUBLE / SINGLE SKIN AIR WASHER EVAPORATIVE COOLING

An Evaporative Air Washer Cooling System provides low first and operating cost alternative to refrigerated air conditioning. Air Washer produces effective cooling by combining a natural process of water evaporation with reliable air motion system. Energy is removed from air stream adiabatically.

Direct Evaporative cooling is used to lower the temperature of air using latent heat & evaporation changing of water to vapour. In the process, the energy in the air in the air does not change. Warm dry air is changed to cool moist air. Heat in the air is used to evaporate air. Air cooling is a single pass air system whereby adequate air exhaust arrangement should be planned. Evaporative cooling is suited for dry and hot climate. Also it can used to advantage to ventilate areas of high heat generation.

## APPLICATIONS

- Industrial Plant
- Commercial Kitchen
- Food Courts & cafeteria
- Laundries
- Warehouses
- Workshops
- Spot Cooling
- DG Ventilation
- Comfort Ventilation
- Poultry Farm, Green house & mushroom farming

## AVANTAGES

- Less expensive to install
- Less expensive to operate, Energy efficient
- Ease of maintenance

## CONSTRUCTION FEATURES

### CASING

Double Skin casing panels with 25/ 50 mm thick PUF Panel supported on extruded aluminium hollow profile frame work. The inner & outer skins are plain & pre-coated GSS.

OR

Single skin GSS panels on extruded aluminium frame work

### FAN & MOTOR

DIDW, Forward / backward curved AMCA certified centrifugal fan, belt driven complete with TEFC, squirrel cage induction, class 'F' insulation, IP-55 motor. Fan motor is suitable for 3 ph, 415 V  $\pm$  10%, 50 Hz AC. Fan & motor are mounted on a common base frame on vibration isolator.

### WET DECK

It contains specially treated cellulose paper fill media which is capable of absorbing and retaining water to provide maximum cooling efficiency. This media does not allow water carry over if the face velocity over the media is kept below 2.5 m/sec. Cross corrugation of media maximizes mixing of air & water for attaining higher saturation efficiency. Standard pad thickness is 200 mm.

### WATER STORAGE TANK

Heavy gauge galvanized sheet, (MS sheet with FRP Lining optional) complete with make up, overflow & drain connection.

### PUMP

Monobloc centrifugal pump is provided for water re-circulation.

### PRE-FILTERS

Pre-filters are provided to minimize dust loading of paper media. These filters are 50 mm thick. Pre-filters can be either of synthetic non woven media or expanded aluminium mesh

### OPTIONS

- Cooling Pad thickness to meet higher saturation efficiency.
- Single bank spray chambers with multi bank PVC eliminators for Scrubbers in place of cooling pad media.
- Multi bend PVC eliminator
- Standby pump



## DOUBLE SKIN EVAPORATIVE AIR WASHER

MODEL NO.	AIR QTY.		FAN		COIL FACE AREA		MOTOR	OVERALL DIMENSION		
	CFM	CMH	Dia (mm)	Nos.	Sqft.	Sqmt.	KW	H (mm)	W (mm)	L (mm)
UAW 003	3000	5100	280	1	6	0.56	2.2	1100	1000	1700
UAW 005	5000	8500	400	1	10	0.93	3.7	1400	1250	1850
UAW 006	6000	10200	450	1	12	1.11	3.7	1500	1400	1850
UAW 008	8000	13600	500	1	16	1.49	3.7	1600	1550	2000
UAW 010	10000	17000	560	1	20	1.86	5.5	1600	1750	2150
UAW 012	12000	20400	630	1	24	2.23	5.5	1900	1850	2300
UAW 014	14000	23800	710	1	28	2.60	7.5	1900	2000	2350
UAW 016	16000	27200	710	1	32	2.97	7.5	2100	2000	2450
UAW 018	18000	30600	710	1	36	3.34	11	2250	2200	2600
UAW 020	20000	34000	800	1	40	3.72	11	2250	3350	2700
UAW 022	22000	37400	800	1	44	4.09	11	2700	2450	2350
UAW 025	25000	42500	900	1	50	4.65	11	3000	2600	2350
UAW 030	30000	51000	900	1	60	5.57	15	3000	3000	2450
UAW 035	35000	59500	1000	1	70	6.50	15	3000	3100	2450
UAW 040	40000	68000	800	2	80	7.43	11 x 2	2700	4000	2450
UAW 050	50000	85000	900	2	100	9.29	11 x 2	3000	4000	2450

- a) Pad area indicated is based on 500 FPM (2.5 m/sec) face velocity
- b) Pad thickness considered is 8 inch (200 mm) suitable for 90% saturation efficiency
- c) Pad thickness considered is 8 inch (200 mm) suitable for 90% saturation efficiency
- d) Unit Dimensions indicated are approximate only based on "DRAW THRU" arrangement, pre-filter 200 mm thick pad and fansection with 25 mm PUF panels.
- e) Standard models include forward curved, DIDW Centrifugal Fans with single pump
- f) Motors are suitable for 3 Ph, 415 V, 50 Hz, AC
- g) Specifications are subject to change without notice.